FREEMAN Manufacturing & Supply Company

Safety Data Sheet

TUF-FIL Hi-Temp Repair and Build-Up Material

Section 1 Identification

Product identifiers

TUF-FIL Hi-Temp Repair and Build-Up Material - Gray

Relevant identified uses of the substance or mixture and uses advised against

Polyester Repair Paste – For Professional/Industrial Use Only

Details of the supplier of the safety data sheet

Freeman Manufacturing & Supply Company
1101 Moore Road, Avon, OH 44011 USA
Telephone: (440) 934-1902
Email: contactus@freemansupply.com

Emergency 24-hour telephone number
CHEMTREC: (800) 424-9300

Section 2 Hazard Identification

Hazard classification in accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200

Flammable liquid, Category 3
Skin corrosion/irritation, Category 2
Serious eye damage/irritation, Category 2A
Carcinogenicity, Category 2
Reproductive toxicity, Category 2
Specific target organ toxicity - repeated exposure (liver, nervous system), Category 2

Label elements

Warning

Hazard statements

H226 Flammable liquid and vapor.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects

Precautionary statements

P203 Obtain, read and follow all safety instructions before use.
P210 Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264+P265 Wash hands thoroughly after handling. Do not touch eyes.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves and eye/face protection.
P318 If exposed or concerned, get medical advice.
P303+P361+P353 IF ON SKIN: Take off Immediately all contaminated clothing. Rinse skin with water.
P332+P317 If skin irritation occurs: Get medical help.

Section 2 Hazards Identification

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses if present and easy to do - continue rinsing.
P337+P317 If eye irritation persists: Get medical help.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use a firefighting agent suitable for flammable liquids such as dry chemical carbon dioxide, or to extinguish.
P391 Collect spillage.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents and container to an approved waste disposal plant.

Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
Talc	14807-96-6	30-50
Vinyltoluene	25013-15-4	10-30
N,N-Dimethylaniline	121-69-7	0.1-0.5
Styrene monomer	100-42-5	0.1-0.5
Quartz silica	14808-60-7	<0.1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4 First Aid Measures

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical help if you feel unwell.
IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water.
If skin irritation occurs: Get medical help.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Get medical help if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. If eye irritation persists: Get medical help.

Section 5 Fire-Fighting Measures

Extinguishing media

Use dry chemical, carbon dioxide, water spray (fog), or alcohol-resistant foam.
Do not use water jet.

Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase may occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products

During combustion, decomposition products may include carbon dioxide, and carbon monoxide.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool.

Section 6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ventilate the area with fresh air. In confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Methods and materials for containment and cleaning up

Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7 Handling and Storage

Precautions for safe handling

Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Do not store above the following temperature: 38°C (100.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed. Do not store in unlabeled containers. See Section 10 for incompatible materials before handling or use.

Section 8 Exposure Controls/Personal Protection

Components with occupational exposure limits

Ingredient	CAS Number	OSHA PEL 8-hour TWA	NIOSH REL 10-hour TWA	ACGIH TLV 8-hour TWA
Talc	14807-96-6	20 mppcf (mineral dusts)	2 mg/m^3 (respirable particulates)	2 mg/m^3 (respirable particulates)
Vinyltoluene	25013-15-4	100 ppm (480 mg/m^3)	100 ppm (480 mg/m^3)	10 ppm

Section 8 Exposure Controls/Personal Protection

Styrene monomer	100-42-5	100 ppm 200 ppm (C)	50 ppm (215 mg/m^3)	10 ppm
N,N-Dimethylaniline	121-69-7	Skin: 5 ppm (25 mg/m^3)	Skin: 5 ppm (25 mg/m^3)	Skin: 5 ppm (25 mg/m^3)

Engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. An eyewash station and safety shower should be located near the workstation.

Personal protective equipment (PPE)

Eye/face protection: Safety eyewear complying with an approved standard should be used. Wear tight sealing safety goggles.

Skin/hand protection: Prevent skin contact when handling material. Use disposable chemical-resistant, impervious gloves to prevent skin contact. Contaminated gloves should be replaced.

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

General Hygienic Practices

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Section 9 Physical and Chemical Properties

Appearance	Dark gray paste
Odor	Pungent styrene
Odor Threshold	No data available
pH	No data available
Melting Point	No data available
Boiling Point	No data available
Flash Point (Closed Cup)	53°C (127°F)
Evaporation rate	No data available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability Limits	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Density	1.6 g/mL
Specific Gravity	1.6 (Water = 1)
Solubility in Water	Negligible
Coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Volatile Organic Compounds	283 g/L (VOC Material)
Volatile Organic Compounds	283 g/L (VOC less water and exempt compounds)
Percent volatile	17.7 % weight

Section 10 Stability and Reactivity

Reactivity: Not expected under normal conditions of storage and use.
Chemical stability: Stable under recommended storage conditions. May become unstable at elevated temperatures and/or pressures.
Possibility of hazardous reactions: Hazardous polymerization will not occur under normal conditions of storage and use.
Conditions to avoid: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.. Keep away from heat and direct sunlight.
Incompatible materials: Oxidizing agents, metals, strong acids
Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11 Toxicological Information

Acute toxicity

Ingredient	CAS Number	LD50 Oral Rat	LC50 Inhalation Rat 4 hour	LD50 Dermal Rabbit
Talc	14807-96-6	>5,000 mg/kg	Not established	Not established
Vinyltoluene	25013-15-4	3,275 mg/kg	16.89 mg/l	4,400 mg/kg
Styrene monomer	100-42-5	5,000 mg/kg	11.8 mg/l	>2,000 mg/kg
N,N-Dimethylaniline	121-69-7	951 mg/kg	3.1 mg/l	1,692 mg/kg

Potential acute health effects

Inhalation: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
Skin Contact: Causes skin irritation. Signs/symptoms may include localized redness, swelling, itching, and dryness.
Eye Contact: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
Ingestion: May be harmful if swallowed. Gastrointestinal Irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin Corrosion/Irritation: Causes skin irritation.
Serious Eye Damage/Irritation: Causes serious eye irritation.
Skin Sensitization: Not classified
Respiratory Sensitization: Not classified
Carcinogen: Suspected of causing cancer.
Styrene monomer (CAS 121-69-7) classified by IARC as Group 2A: probably carcinogenic to humans
Germ Cell Mutagenicity: Not expected to be mutagenic
Reproductive Toxicity: Suspected of damaging the unborn child.
Aspiration Hazard: Not expected in product form
Specific target organ toxicity (STOT) - single exposure: No data available
Specific target organ toxicity (STOT) - - repeated exposure: May cause damage to organs through prolonged or repeated exposure. Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice. Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision. Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Section 12 Ecological Information

Ecotoxicity

Ingredient	Toxicity to fish	Toxicity to aquatic invertebrates	Toxicity to algae
Talc	Acute LC50 >100 g/L, Brach danio rerio	Not listed	Not listed
Vinyltoluene	LC50 - Pimephales promelas (fathead minnow) - 5.2 mg/l - 96 h Static test (OECD Test Guideline 203)	Immobilization EC50 - Daphnia magna (Water flea) - 1.3 mg/l - 48 h (OECD Test Guideline 202)	Growth inhibition EC50 - Selenastrum capricornutum (green algae) - 2.6 mg/l - 72 h (OECD Test Guideline 201)
Styrene monomer	LC50 (Pimephales promelas (fathead minnow)): 10 mg/l End point: mortality Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes	EC50 (Daphnia magna (Water flea)): 4.7 mg/l End point: Immobilization Exposure time: 48 h Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes	ErC50 (Pseudokirchneriella subcapitata (green algae)): 4.9 mg/l Exposure time: 72 h Test Type: static test
N,N-Dimethylaniline	Flow-through test LC50 - Pimephales promelas (fathead minnow) - 78.2 mg/l - 96 h Remarks: (ECHA)	EC50 - Daphnia magna (Water flea) - 2.3 mg/l - 48 h Remarks: (ECHA)	Static test NOEC - Chlorella pyrenoidosa - 14 mg/l - 72 h Remarks: (ECHA)

Persistence and degradability

No data available

Bioaccumulative potential

Ingredient	$LogP_{ow}$	BCF	Potential
Vinyltoluene	3.35	96	low
Styrene monomer	2.96	74	low

Mobility in soil

No data available

Results of PBT & vPvB assessment

No data available

Section 13 Disposal Considerations

Contact a licensed contractor for detailed recommendations. Follow applicable Federal, State, and local regulations. Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Section 14 Transport Information

DOT/IMDG

UN 3269, Polyester Resin Kit, 3, III
Limited Quantity for shipments under 1.3 gal.

Section 15 Regulatory Information

US Federal Regulations

Emergency Planning and Community Right-to-Know Act (EPCRA), Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372: Styrene (CAS 100-42-5) CERCLA RQ = 1000 lb.

US State Regulations

California Proposition 65: ⚠ WARNING**:** This product can expose you to chemicals including styrene and crystalline silica, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Inventories

United States: All components are listed or exempted.

Canada: At least one component is not listed in DSL but all such components are listed in NDSL.

Section 16 Other Information

Disclaimer

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

Date of initial issue: June 1, 2015
Date of previous revision: June 21, 2024
Date of current revision: April 11, 2025